collecting and storing spectral information representative of substantially all of said relevant interfering components at other frequencies; [to quantify]

quantifying absorbance of said interfering components at said other frequencies;

receiving a signal corresponding to a spectroscopic signal representative of said sample; and

[in which] removing spectral information of said interfering components [is removed] from a sample spectra at said analyte frequency[;

said basis set being stored in a memory for use by a processor during multi-spectral analysis].

37. (amended) The medium [apparatus] of Claim 36, further comprising:

a plurality of basis sets for an analyte.

38. (amended) The medium [apparatus] of Claim 36, [further comprising] in combination with:

an instrument for determining the concentration of said target analyte in said sample with said basis set, said instrument comprising:

a spectroscopic device for collecting spectra data;

an analog-to-digital converter for converting said spectral data collected by said spectroscopic device to digital data;

a processor for operating upon such digital input data in accordance with various transforms stored in one or more look-up tables (LUTs), wherein said LUTs contain transforms that incorporate said basis set, and wherein said transforms use said basis set to identify and remove substantially all interfering constituents from the spectral signal produced by said spectroscopic device.

~~39~~ 40. (amended) The medium [apparatus] of Claim 36, wherein said basis set is stored in a lookup table.

~~40~~ 41. (amended) The medium [apparatus] of Claim 36, said basis set comprising:

a series of spectra of said analyte at different physiological concentrations of interest.

~~41~~ 39. (amended) The medium [apparatus] of Claim 38, wherein said basis set is applied before or in connection with a physical model that corrects for interfering physical factors that include any of scattering, pathlength, and temperature.

64

42. (amended) The medium [apparatus] of Claim 36, further comprising:
a plurality of basis sets that are used to quantify an analyte in a liquid sample.

43. (amended) The medium [apparatus] of Claim 36, wherein different pathlengths are selected for each spectral window.

44. (amended) The medium [apparatus] of Claim 43, wherein said pathlengths comprise:
about 1 mm for a combination band region;
about 5 to 10 mm for a first overtone region; and
about 10 mm or greater for a second overtone region.

45. (amended) The medium [apparatus] of Claim 36, wherein one or more basis sets are applied to a spectroscopic signal during analysis to produce an accurate spectral representation from which analyte concentration may be accurately determined.

46. (amended) The medium [apparatus] of Claim 36, wherein said basis set includes all interfering components found in said sample.

47. (amended) The medium [apparatus] of Claim 36, wherein said spectral information is non invasively collected.

REMARKS

1. Claim Rejections – 35 USC § 101.

Claims 36-47 have been rejected under 35 USC § 101 because the Examiner deems the claimed invention directed to non-statutory subject matter.

Responsive thereto, Applicant has substantially revised Claim 36 to cast the claimed subject matter in the form of computer code embodied in a tangible medium for executing a computer implemented method.

2. Claim rejections – 35 USC § 112